

# **TECHNICAL REVIEW DOCUMENT FOR MINOR MODIFICATION OF OPERATING PERMIT 96OPAD172**

to be issued to:

Sinclair Oil Corporation – Denver Products Terminal  
Adams County  
Source ID 00100019

Prepared by Cathy Rhodes  
June, 2004

## **1. Purpose**

This document will establish the basis for decisions made regarding the Applicable Requirements, Emission Factors, Monitoring Plan and Compliance Status of Emission Units covered by the Operating Permit proposed for this site. The renewal operating permit was issued on October 1, 2003. This document is designed for reference during review of the proposed permit by the EPA. The conclusions made in this report are based on information provided in the minor permit modification applications submitted May 17, 2004 and June 14, 2004. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

## **2. Source Description**

This source is classified as a petroleum products terminal which falls into the Standard Industrial Classification 5171. Processes include fourteen (14) storage tanks for gasoline, fuel oil #1, fuel oil # 2, MTBE and ethanol. The facility also contains a tank truck loading rack, a railcar loading rack. Emissions from the tank truck loading rack, tank # 1 and tank # 14 are controlled with a flare.

The facility is located in Henderson. The Denver metro area is classified as attainment/maintenance for CO, PM<sub>10</sub> and Ozone. This facility is within 100 km of a Class I area, Rocky Mountain National Park but there are no other states within 50 miles. The applicant certified that they are not subject to the provisions of the Section 112(r) or the Federal Clean Air Act. The source category is subject to the Gas Distribution MACT. This source, however, received a synthetic minor permit which limits their HAPs to below major source level. They are therefore not subject to the Gas Distribution MACT.

## **3. Project Description**

Two projects are occurring at this facility that require a modification to the operating permit. Because the projects are unrelated, they are evaluated separately for Prevention of Significant (PSD) purposes.

#### **A. Loading Rack**

In order to accommodate an increased demand for petroleum products, shorten the waiting period for carriers to load, and to minimize safety issues regarding tank trucks waiting on the nearby street, the permittee is expanding the existing loading rack from its current 3-bay configuration to a 5-bay configuration.

Annual throughput limits in the permit will not change, however. The modification is a physical change to the loading rack that must be evaluated to determine if PSD applies. Actual emissions prior to the change are compared to potential emissions after the change.

Past actual emissions are based on the average of 2002 and 2003 emissions:

20.3 tons/year VOC  
0.6 tons/year HAPs  
4.2 tons/year NOx  
10.4 tons/year CO

Potential emissions are the same as currently permitted:

55.1 tons/year VOC  
1.5 tons/year HAPs  
6.0 tons/year NOX  
15.0 tons/year CO

The emission increase due to this project is as follows:

Pollutant	Potential Emissions TPY	Actual Emissions TPY	Emission Increase TPY	PSD Significant Level TPY
VOC	55.1	20.3	34.8	40
HAPs	6.0	0.6	0.9	10/25
NOx	6.0	4.2	1.8	40
CO	15.0	10.4	4.6	100

These increases are less than the significant emission increase limits, therefore PSD does not apply.

#### **New Source Performance Standards (NSPS) Applicability**

This project will allow for a higher instantaneous petroleum product loading rate at the loading rack.

The loading rack is not currently subject to the NSPS for Bulk Gasoline Terminals, 40

CFR Part 60, Subpart XX, because it was an existing source as of the effective date of the subpart. Based on the following information, the Division has determined that this project does not subject the loading rack to NSPS requirements.

“Modification” is defined in 60.14 as any physical or operational change which results in an increase in emission rate of any pollutant to which a standard applies. EPA guidance indicates that the increase in emission rate is evaluated based on the maximum hourly design rate of the source.

The VOC emission rate from the flare is based upon the volumetric flowrate of vapors vented from Tank #1 to the flare and the VOC concentration in those vapors. The volumetric flow rate of vapors to the flare are limited by the capacity of the Tank #1 vapor fan. There are no changes to the fan (or the flare) associated with this project. Because the vapors vented from Tank #1 to the flare are saturated with hydrocarbons, there is little variability in the VOC concentration. The concentration of VOC in these vapors is also unaffected by the number of bays present at the loading rack. Therefore, the hourly maximum emission rate will not increase due to this project, and the change is not a “modification” under 60.14.

The permittee provided information which demonstrates that this change to the loading rack is not “reconstruction” under 60.15.

### **Applicable Requirements**

This project does not require the addition or modification of any applicable requirements or monitoring procedures in the operating permit. The dates are updated in Section I, Condition 5.1 table.

### **Minor Permit Modification**

The tank rack is subject to Regulation No. 7, Section VI, which is part of the State Implementation Plan, therefore the required control requirements can be taken into account when determining the potential to emit. The potential emission increase is less than 40 tons/year, therefore this project qualifies for the minor permit modification procedures.

### **B. Rail Car Ethanol Off-Loading**

The second project will add an additional ethanol off-loading pump at the rail rack in order to minimize the time a rail car spends on the rail spur during the off-loading operation. Ethanol is off-loaded to Tanks 3, 5 and 6. There will be additional piping components added to support this project.

Annual emissions will increase as a result of the new piping components. In addition, annual actual emissions at the three storage tanks will increase due to debottlenecking of the rail rack off loading procedure.

Emissions from the new piping components: 0.7 ton/year VOC

Total potential emissions from the three tanks is 25.1 tons/year VOC. Therefore, the maximum possible actual emission increase from the tanks is 25.1 tons/year.

The total possible emission increase from this project is therefore 25.8 tons/year. This is less than the 40 tons/year significant increase level, therefore PSD does not apply to this project.

### **Applicable Requirements**

This project does not require the addition or modification of any applicable requirements or monitoring procedures in the operating permit. The dates are updated in Section I, Condition 5.1 table.

### **Minor Permit Modification**

The tanks are subject to Regulation No. 7 requirements, which are part of the State Implementation Plan, therefore these provisions can be taken into account to determine the potential to emit. The potential emission increase from the project is less than 40 tons/year, therefore the increase qualifies for the minor permit modification procedures.